



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

**NOTE:** Date & initial all entries

**Work Order ID 53240**

October 28, 2009 11:33:56 AM



Page 2

Item ID: PB67-43001-83

Revision ID: B1

Item Name: PB67-43001-83

Start Date: 10/29/2009 Start Qty: 12.00

Required Date: 11/20/2009 Req'd Qty: 12.00

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

→ Solv 127

0.00

140



Powdercoat

Powder Coating

Green Sandtex(Ref.4.3.5.8) per QSI005 4.3

0.00

M18140

0.00

→ 10/04/24

150



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

START TIME: 11:50pm  OVEN TEMPERATURE:  
FINISH TIME: 3:45pm  320°F

BK 10-02-24 (12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 53240**

October 28, 2009 11:33:56 AM



Page 3

Item ID: PB67-43001-83

Revision ID: B1

Item Name: PB67-43001-83

Start Date: 10/29/2009 Start Qty: 12.00

Required Date: 11/20/2009 Req'd Qty: 12.00

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160



Purchasing

PURCHASING

0.00

Purchasing

Memo

0.00

P/O: 12624

CL 10/9/23 (12)

170



Packaging

Packaging

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

Lyon 11

Memo

0.00

180



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

8.10.04  
to Rev C Day

(11) \_\_\_\_\_ P.T.O.

W/O: 53240

## WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/10/04	170	telmer keep 1 pc as a sample for their production	CD	10/10/05	1	C 10/10/05	

Part No: PB67-43001-83 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date &amp; initial all entries

**Work Order ID 53240**

October 28, 2009 11:33:56 AM



Page 4

Item ID: PB67-43001-83

Revision ID: B1

Item Name: PB67-43001-83

Start Date: 10/29/2009 Start Qty: 12.00

Required Date: 11/20/2009 Req'd Qty: 12.00

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center ID

190



Packaging

Packaging

Operation  
DescriptionIdentify as per dwg & Stock Location: 445Set Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200



QC

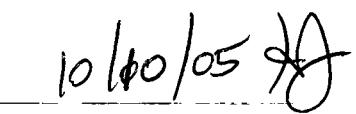
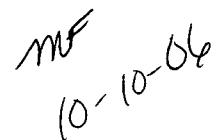
Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

Accept



Setup Start



Stop



Cust Item ID:

Customer:

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

October 28, 2009 11:33:56 AM

Page 1

Work Order ID: 53240



Parent Item: PB67-43001-83RevB1



Parent Item Name: PB67-43001-83

Start Date: 10/29/2009

Required Date: 11/20/2009

Comments:

Start Qty: 12.00

Required Qty: 12.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

PB67-43001-185RevB1



Manufactured No

D-Pad Back Plate

100 Each 12.0000 12.0000



Sp 10.01.08

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST

12

41566

12

53298 126X



Sp 10.01.08

PB67-43001-189RevB1



Manufactured No

D-Pad Face

PB67-43001-193RevB1



Manufactured No

D-Pad Base

100 Each 0.0000 12.0000



Sp 10.01.08

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST

10

44992

10

110 Each 11.0000 12.0000



Sp 10.01.08

PB67-43001-339RevB1



Manufactured No

D-Pad Top

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST439A

11

52420

11

53300

Sp 10.01.08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

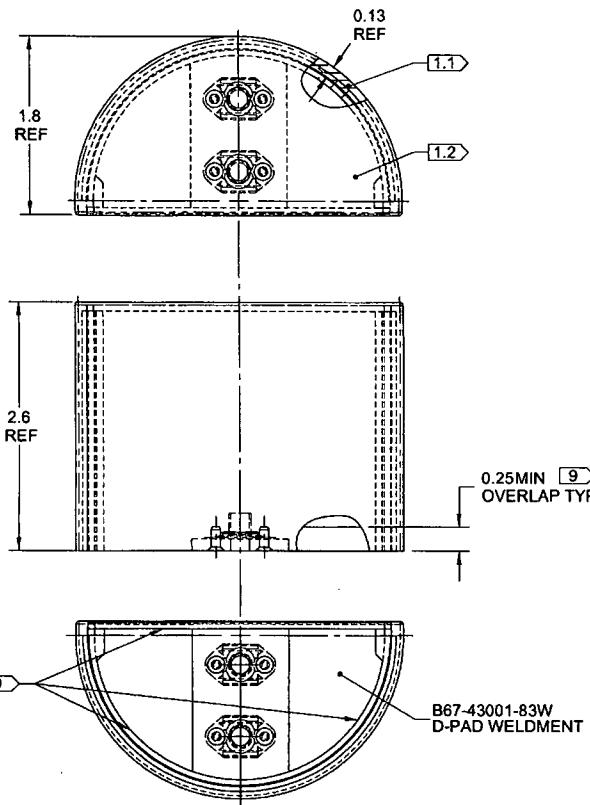
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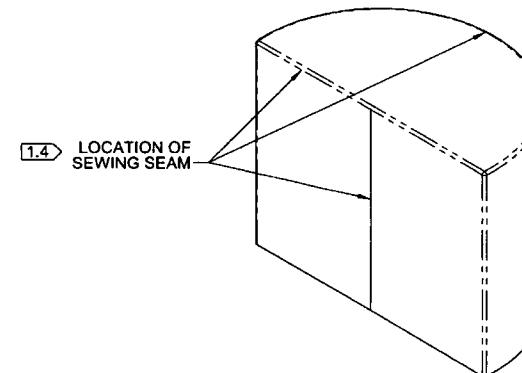
3

2

1



ITEM	QTY -83	P/N	DESCRIPTION
1	X	B67-43001-83	D-PAD ASSEMBLY, SHORT
2	1	B67-43001-83W	D-PAD WELDMENT, SHORT
3	A/R	1637-002	SEE NOTE 1.1
4	A/R	1495	SEE NOTE 1.2
5	A/R	LA4009	SEE NOTE 1.3
7	A/R	2530	SEE NOTE 1.4



RELEASED  
2010-09-16  
M

NOTES:

- 1) MATERIAL:
  - 1.1) FOAM: ETHYLENE PROPYLENE NEOPRENE SBR CLOSED-CELL, FLAME RETARDANT, 0.125 THICK, PER ASTM D1056 2A2, SERVICE TEMP -40°F TO +200°F, COLOUR: BLACK  
REF. TULMAR P/N 1637-002
  - 1.2) FABRIC: 100% 420 DENIER NYLON, MIN THREAD COUNT 35X35, POLYURETHANE COATED ONE SIDE, COLOUR: BLACK  
REF. TULMAR P/N 1495
  - 1.3) ADHESIVE: URETHANE WITH CATALYST, TWO PART, CLIFTON LA4009
  - 1.4) THREAD: NYLON, BLACK, V-T-295 TYPE 2, CLASS A, SIZE F, 8-10 STITCHES PER INCH  
REF. TULMAR P/N 2530
- 2) FINISH: BOND NEOPRENE TO COVER PLATE USING ADHESIVE, COVER WITH DENIER AS SHOWN.
- 3) TOLERANCES: PER TABLE 1 (ZN A3-1) UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.27 lbs REF
- 8) NUTPLATES AD HOLES MUST REMAIN FREE OF ADHESIVE AND FABRIC
- 9) DENIER NYLON TO OVERLAP BY 0.25 MIN AND BE BONDED ALL AROUND INNER SIDES OF PLATE

TABLE 1 3

TOLERANCES ON FABRIC (PARTS AND ASSEMBLIES)	
1/8: DIMS <2	
1/4: DIMS 2 TO <10	
1/2: DIMS 10 TO <20	
5/8: DIMS 20 TO <40	
1.5%: DIMS EQUAL TO OR > 40	

APPROVED *MM*  
DE APPR. N/A  
DATE 10.04.27

REV.	DESCRIPTION	BY	DATE
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
C	REDRAWN PREMIER AVIATION DRAWING IAW DART QSI 018, QSI 043 AND TULMAR SAFETY SYSTEMS INC.'S MANUFACTURING PROCESS AND TOLERANCES ON FABRIC. FOR PREVIOUS REVISIONS, REFER TO SHEET 1 OF PREMIER AVIATION DRAWING NO. B67-43001. REASON: SEE PAR#09-011.	MB	10.04.27
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.04.27		
DRAWING NO.	B67-43001-83	REV. C	
TITLE	D-PAD ASSEMBLY, SHORT	SCALE	NTS

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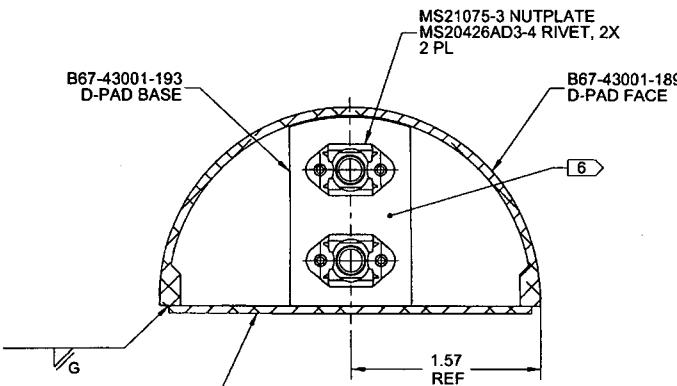
5

4

3

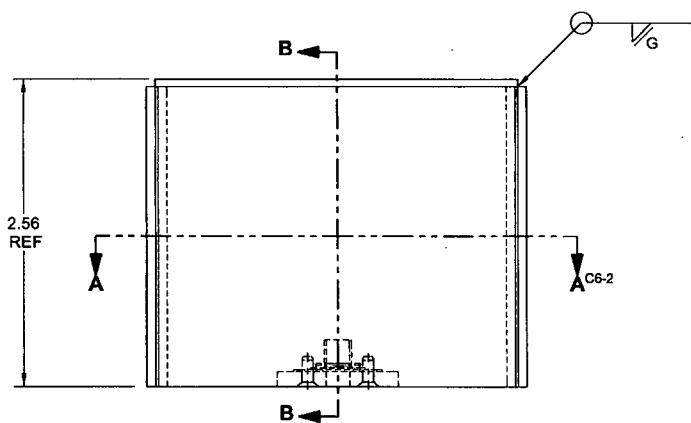
2

1

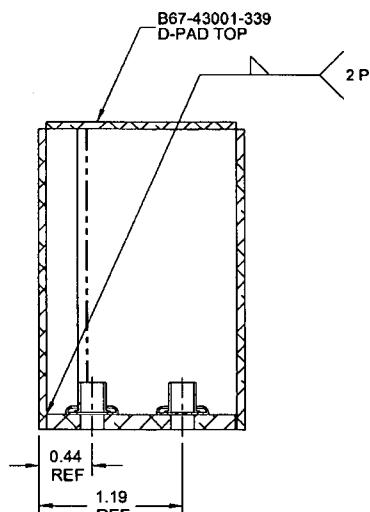


B67-43001-185  
D-PAD BACK PLATE

SECTION A-A B5-2



B67-43001-83W SHORT D-PAD ASSY



SECTION B-B B7-2

A  
NOTES:

- 1) MATERIAL: NONE
- 2) FINISH: POWDER COAT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "B67-43001-83W" AND B/N "BXXXX" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.27 lbs
- 8) WELDING: PER DART QSI 004

ITEM	QTY -83W	P/N	DESCRIPTION
1	X	B67-43001-83W	D-PAD WELDMENT, SHORT
2	1	B67-43001-185	D-PAD BACK PLATE
3	1	B67-43001-189	D-PAD FACE
4	1	B67-43001-193	D-PAD BASE
5	1	B67-43001-339	D-PAD TOP
6	4	MS20426AD3-4	RIVET
7	2	MS21075L3	NUT PLATE

10/04/2010

RELEASED  
R 2010-09-16  
M

DESIGN	RW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	<i>JK</i>	DRAWING NO. B67-43001-83
CHECKED	<i>JK</i>	REV. C
MFG. APPR.	<i>JK</i>	SHEET 2 OF 2
APPROVED	<i>JK</i>	TITLE
DE APPR.	N/A	SCALE
DATE	10.04.27	NTS

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2

1

# TULMAR

# PACKING SLIP

# COPY

Packing Slip No. 37305

37305

Ship Date 4-Oct-10

Tulmar Safety Systems Inc.  
1123 Cameron Street  
Hawkesbury, ON K6A 2B8 CA  
Tel: 613-632-1282  
Fax: 613-632-2030  
MID : XOTULSAF1123HAW  
email: info@tulmar.com

**Bill To:**

**Dart Aerospace**  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7. Canada

Ship to:

**Dart Aerospace**  
1270 Aberdeen Street  
Call Chantal re Pick-Up  
Tel: 613-632-9577  
Hawkesbury, ON K6A 1K7. Canada

Order number	Sales order date	Account number	Account manager
25447	28-Sep-10	CDART100	Barney Bangs
<b>PO number</b>	<b>Ship Via</b>	<b>Shipping Terms</b>	
PO12624	Pick-Up	FOB HAWKESBURY	
Item No.	Quantity ordered	UOM	Qty Shipped/Returned
<b>Description</b>			
8421-105 Cover Plate, 200/ Drawing No: B67-43001-73 DWG Rev: C	7	EA	7
<b>Lot No:</b> BATCH0000000005 Qty: 7			1
8421-101 D-Pad Assembly, Short/ Drawing No: B67-43001-83 DWG Rev: C	11	EA	11
<b>Lot No:</b> BATCH0000000008 Qty: 11			1
8421-102 D-Pad Assembly, Long/ Drawing No: B67-43001-85 DWG Rev: C **Dart to make new holes themselves	3	EA	3
<b>Lot No:</b> BATCH0000000006 Qty: 3			1
8421-104 Cover Plate/ Drawing No: B67-43001-173 DWG Rev: C	11	EA	11
<b>Lot No:</b> BATCH0000000008 Qty: 11			1
8421-103 Cover Plate/ Drawing No: B67-43001-181 DWG Rev: C	11	EA	11
<b>Lot No:</b> BATCH0000000006 Qty: 11			1

# PACKING SLIP

# TULMAR

Tulmar Safety Systems Inc.

1123 Cameron Street  
Hawkesbury, ON K6A 2B8 CA  
Tel: 613-632-1282  
Fax: 613-632-2030  
MID : XOTULSAF1123HAW  
email: info@tulmar.com

Bill To:

**Dart Aerospace**  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7. Canada

Packing Slip No.

**37305**

**Ship Date**

4-Oct-10

Ship to:

**Dart Aerospace**  
1270 Aberdeen Street  
Call Chantal re Pick-Up  
Tel: 613-632-9577  
Hawkesbury, ON K6A 1K7. Canada

Shipper



Date: 4-oct-2010

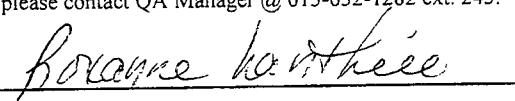
**Certificate of Conformance**

Not Applicable

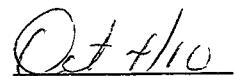
See Certification Enclosed

I hereby certify that the items listed hereon have been inspected, and / or tested (as applicable), conform to all specifications and requirements detailed in the contract or purchase order. Objective evidence to support this statement is on file, and can be made available upon request.  
If any questions or concerns, please contact QA Manager @ 613-632-1282 ext. 245.

Authorized Inspector



Date:





# J ENNIS FABRICS LTD.

Wholesale Distributor of Textiles and Supplies

March 9, 2010

**Fax To:** Tulmar Safety Systems  
**Fax:** 613-632-2030  
**Attention:** Sandra Nadeau

**EDMONTON**  
**HEAD OFFICE**  
12122 - 68 Street  
Edmonton, AB T5B 1R1  
Canada  
Phone: (780) 474-5721

Certificate of Conformance

**Re: PO 17505-00 for Oxford 7 Black**

The goods shipped on P/O 17505-00 are as per sampled goods. Specification as follows:  
As per mill documentation:

**Oxford 7 black** is in compliance with the following standards:

**Width:** Product is 58 inches Wide.

**Roll Size:** Average Roll Length is 75 Yards.

**Weight:** Product Weight is 6.79 Ounces per Sq. Yd. /Product Weight is 10.94 oz per Lin.Yd

**Content:** 100% Nylon

**Coating:** Product has a Polyurethane Coating {approximately 0.65 oz/ Sq.Yd. (18.5g/sq.yd.)}

**Denier:** Yarn is 420 Denier.

810/10/04

**Thread Count:** Construction is 62 x 38 Threads per Square Inch

**Protective Finish:** Product is Water Repellent.

**Hydro Resist:** AATCC 127 (Suter): Average 800 mm

**Piece # 105255723, Manufacture Date: 12/30/09, Lot Number: 379360**

**Piece # 105255723, Manufacture Date: 12/30/09, Lot Number: 379360**

**Piece # 105255749, Manufacture Date: 12/30/09, Lot Number: 379360**

**VANCOUVER**  
139 1/2 Bridgeport Road  
Richmond, BC V6V 1J6  
Canada

used on TSS 8421-105 (B67-43001-73)

8421-101 (B67-43001-83)

8421-102 (B67-43001-85)

8421-104 (B67-43001-173)

8421-103 (B67-43001-181)

**MONTRÉAL**  
9280 boulevard du Golf  
Anjou, QC H1J 3A1  
Canada

Sincerely:  
J. Ennis Fabrics Ltd.

S. James

Sharon James  
Product Development

English: 1-800-66-ENNIS

Fax: (780) 479-6135  
www.jennisfabrics.com

Français: 1-888-66-ENNIS

TSS 1495/1

E.F. Walter Inc.	<b><u>CERTIFICAT DE CONFORMITÉ</u></b> <b><u>CERTIFICATE OF COMPLIANCE</u></b>	Approved <b>JR</b> Date <b>1/3/02</b>
Revision # 0	Revision date: January 30, 2002	Doc # F.7.5.5.A

Date : 09/09/2008

VENDU À 6048  
SOLD TO TULMAR SAFETY SYSTEMS INC.  
1123 CAMERON STREET  
HAWKESBURY ONT  
K6A 2B8

**FOURNISSEUR  
VENDOR**

E.F. WALTER INC.  
180 BARTON ROAD  
TORONTO, ONTARIO  
M9M 2W6

Commande / Order # 14649-00  
Notre / Our Reference # 55968

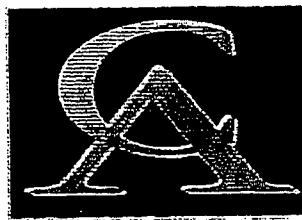
Nous certifions par la présente que la totalité du matériel inscrit ci-dessous a été inspecté et vérifié et est conforme aux devis et aux normes mentionnés sur votre commande.

commande.  
We hereby certify that all of the material listed below has been inspected and tested and  
conforms to the drawings and / or specifications stated on your purchase order.

used on TSS 8421-101 (B67-43001-83)  
102 (B67-43001-85)  
103 (B67-43001-181)  
104 (B67-43001-173)  
105 (B67-43001-73)

Signé  
Signed

TSS # 1637-001 102

FAXED  
Today

**CLIFTON**  
**Adhesive, Inc.**  
Industrial Adhesives & Coatings

Date: 6/11/10

**Certificate of Compliance**

This letter certifies that 11 x 5 gallon pails of LA4009 Adhesive,  
lot number (s) 10-145 was shipped to you on 6/11/10.

*S*  
101004

Clifton Adhesive, Inc manufactured this material according to internal specifications  
which include quality control and assurance procedures. The material was  
manufactured on 5/25/10 against your Purchase Order # 17863-00.

Shelf Life: 1 year from date of manufacture  
Expiration Date: 5/25/11

This letter certifies that 4 x quart cans of CATUR Accelerator,

Lot number 10-138 was shipped to you on 6/11/10.

Clifton Adhesive, Inc manufactured this material according to internal specifications  
which include quality control and assurance procedures. The material was  
manufactured on 5/18/10 against your Purchase Order # 17863-00.

Shelf Life: 6 months from date of manufacture  
Expiration Date: 11/18/10

Sincerely,

*Daniel Constantino*

Daniel Constantino  
Quality Assurance Mgr/ISO Coordinator



48 Burgess Place • Wayne, NJ 07470 USA

Phone: 973-694-0845 • Fax: 973-694-5678

[www.cliftonadhesive.com](http://www.cliftonadhesive.com)

Used on TSS 8421-101 (B67-43001-83)  
102 (B67-43001-85)  
103 (B67-43001-181)  
104 (B67-43001-173)  
105 (B67-43001-73)

*TSS 7/22/37*

*(S)*



**American & Efird Inc.**  
**Post Office Box - 507**  
**Mount Holly, NC -28120**

**Test Report**

Date : 10/1/2010

Mfg. Date : 3/27/2010

Quantity: 44

Lot Id : 705150

Product : Tex 90 BONDED 'Z' NYLON FILAMENT Black AA 63002 16 OZ

Specification : A-A-59826 TPII CLA F BT92N4

Customer Order Number : 17499-00

Plys (Visual) : 4  
 Twist Direction : Z

Customer : Tulmar Safety Inc.

A&E Color : 63002 Black  
 AA

Shipped To : Tulmar Safety Inc.

Description : Bright, Continuous Multifilament Nylon, Melting Point >472F; Colorless Nylon Polymer Bond;  
 Polypropylene Spools

Characteristic	Test1	Test2	Test3	Test4	Test5	Average	Minimum	Maximum
Strength #1 (Pound)	15.2	15.7	15.6	15.7	15.8	15.619		
Strength #2 (Pound)	15.4	15.1	15.2	15.4	14.8	15.177		
Average Strength (Pound)						15.4	11.8	

Elongation #1 (Percent)	20.5	22.4	21.8	22	21.8	21.722		
Elongation #2 (Percent)	22.3	21.4	21.9	22.5	21.1	21.856		
Average Elongation (Percent)						21.8		26

Lube	Pass	Pass
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Twist S #1 (Turns per inch)	12.2	12.2	12.2	12.2	12.2	12.2		
Twist S #2 (Turns per inch)	12.2	12.2	12.2	12.2	12.2	12.2		
Average Twist S (Turns per inch) Initial Twist						12.2		

Twist Z #1 (Turns per inch)	8.1	8.1	8.1	8.1	8.1	8.1		
Twist Z #2 (Turns per inch)	8.1	8.1	8.1	8.1	8.1	8.1		
Average Twist Z (Turns per inch) Final Twist						8.1	5.5	

Yield #1 (Yards/Pound)	4211.8							
Yield #2 (Yards/Pound)	4114.7							
Average Yield (Yards/Pound)	4163.2	3601	5200					

Laundry #1 (Grading Scale)	5							
Laundry #2 (Grading Scale)	5							
Average Laundry (Grading Scale)	5	3						

used on TSS 8421-102 (B67-43001-85)

Dry Cleaning #1 (Grading Scale)	5	5
Dry Cleaning #2 (Grading Scale)	5	5
Average Dry Cleaning (Grading Scale)	5	3
Perspiration #1 (Grading Scale)	5	5
Perspiration #2 (Grading Scale)	5	5
Average Perspiration (Grading Scale)	5	3
Color Fastness to Light #1 (Grading Scale)	5	5
Color Fastness to Light #2 (Grading Scale)	5	5
Average Color Fastness to Light (Grading Scale)	5	3.4

I certify that the above test were performed under my supervision and in accordance with the specification test requirements and that the reported test results are true, valid and applicable to the samples tested. I further certify that these samples were the only samples tested from the lot of components identified above.

Signed : *Joseph D. Munday*

Joseph D. Munday  
Testing Director

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**Note**



**American & Efird Inc.**  
**Post Office Box - 507**  
**Mount Holly, NC - 28120**

**Test Report**

Date : 9/17/2010

Mfg. Date : 3/27/2010

Quantity: 43

Lot Id : 705150

Product : Tex 90 BONDED 'Z' NYLON FILAMENT Black AA 63002 16 OZ

Specification : A-A-59826 TPII CLA F BT92N4

Plys (Visual) : 4

Customer Order Number : 17499-00

Twist Direction : Z

Customer : Tulmar Safety Inc.

A&amp;E Color : 63002 Black

Shipped To : Tulmar Safety Inc.

AA

Description : Bright, Continuous Multifilament Nylon, Melting Point >472F; Colorless Nylon Polymer Bond;  
 Polypropylene Spools

Characteristic	Test1	Test2	Test3	Test4	Test5	Average	Minimum	Maximum
Strength #1 (Pound)	15.2	15.7	15.6	15.7	15.8	15.619		
Strength #2 (Pound)	15.4	15.1	15.2	15.4	14.8	15.177		
Average Strength (Pound)						15.4	11.8	

Elongation #1 (Percent)	20.5	22.4	21.8	22	21.8	21.722		
Elongation #2 (Percent)	22.3	21.4	21.9	22.5	21.1	21.856		
Average Elongation (Percent)						21.8		26

Lube	Pass	Pass
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Twist S #1 (Turns per inch)	12.2	12.2	12.2	12.2	12.2	12.2		
Twist S #2 (Turns per inch)	12.2	12.2	12.2	12.2	12.2	12.2		
Average Twist S (Turns per inch) Initial Twist						12.2		

Twist Z #1 (Turns per inch)	8.1	8.1	8.1	8.1	8.1	8.1		
Twist Z #2 (Turns per inch)	8.1	8.1	8.1	8.1	8.1	8.1		
Average Twist Z (Turns per inch) Final Twist						8.1	5.5	

Yield #1 (Yards/Pound)	4211.8							
Yield #2 (Yards/Pound)	4114.7							
Average Yield (Yards/Pound)	4163.2	3601	5200					

Laundry #1 (Grading Scale)	5							
Laundry #2 (Grading Scale)	5							
Average Laundry (Grading Scale)						5	3	

used on TSS 8421-101 (B67-43001-83)

TS #253C/48

Dry Cleaning #1 (Grading Scale)	5	5	
Dry Cleaning #2 (Grading Scale)	5	5	
Average Dry Cleaning (Grading Scale)		5	3
Perspiration #1 (Grading Scale)	5	5	
Perspiration #2 (Grading Scale)	5	5	
Average Perspiration (Grading Scale)		5	3
Color Fastness to Light #1 (Grading Scale)	5	5	
Color Fastness to Light #2 (Grading Scale)	5	5	
Average Color Fastness to Light (Grading Scale)		5	3.4

I certify that the above test were performed under my supervision and in accordance with the specification test requirements and that the reported test results are true, valid and applicable to the samples tested. I further certify that these samples were the only samples tested from the lot of components identified above.

Signed : *Joseph D. Munday*

Joseph D. Munday  
Testing Director

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**Note:**

BS # 2530/48  
(S)